REMARKS

The Office Action mailed January 26, 2005, has been received and reviewed. Claims 19 through 21, 34, 43, 45 and 46 were noted as pending in the Office Action. Applicants note that claims 1 through 40, 43, 45 and 46 were pending in application, with claims 1 through 18, 22 through 33 and 35 through 40 withdrawn from consideration as being drawn to a non-elected invention. Claims 41, 42 and 44 were previously canceled. Claims 19 through 21, 34 and 43 stand rejected. Applicants have canceled claim 34, amended claims 43 and 46, and added new claim 47. Reconsideration of the application as proposed to be amended herein is respectfully requested.

Claim Objection

Claim 43 was objected to in the Office Action for reciting non-elected subject matter. Applicants have amended the claim as required by the Office to remove such subject matter.

35 U.S.C. § 112, First Paragraph, Rejections

Claim 43 was rejected in the Final Office Action as assertedly failing to comply with the written description requirement under 35 U.S.C. § 112, first paragraph. Applicants respectfully submit that amended claim 43 is supported by an adequate written description. The Office Action states that applicants "argue that the amended claims recite both structure and function and thus meet the written description requirements," but that "with respect claim 43, the functional limitation with respect to modified SEQ ID NO: 6" is lacking (Office Action at page 4).

Amended claim 43 now recites "said purified and isolated polypeptide comprising an amino acid sequence selected from the group consisting of: SEQ ID NO: 6, SEQ ID NO: 31, an amino acid sequence having at least 30% homology with SEQ ID NO: 6, an amino acid sequence having at least 55% homology with a 326 aa fragment from the C terminal end of the amino acid sequence of SEQ ID NO: 31, and a fragment of any thereof, **said polypeptide or fragment thereof having alcohol acyltransferase or alcohol dehydrogenase activity** and being involved in the biosynthetic pathway for ester production in fruit." Accordingly, applicants submit that amended claim 43 now recites both structure and function, and requests it be allowed.

Claims 19 through 21, 34 and 43 were rejected in the Final Office Action as assertedly lacking enablement under 35 U.S.C. § 112, first paragraph. Claim 34 has been canceled. With respect to claims 19 through 21 and 43, the Office Action states that the "specification does not support the broad scope of the claims" as "the specification does not establish: (A) regions of the protein structure which may be modified without effecting alcohol acyl transferase or alcohol dehydrogenase activity; (B) the general tolerance of acyl transferase or alcohol dehydrogenase to modification and the extent of such tolerance; (C) a rational and predictable scheme for modifying any acyl transferase or alcohol dehydrogenase residues with an expectation of obtaining the desired biological function; and (D) the specification provides insufficient guidance as to which of the essentially infinite possible choices is likely to be successful." (Office Action at page 5).

However, at page 42, lines 16-20 of the as-filed specification, conserved sequences are set forth, which, as explained in the specification, can serve as motifs for the production of nucleotide primers for identifying related genes. Primers based on these motifs may be used to screen polynucleotide extracts from plants to locate proteins that have alcohol acyltransferase activity. One of ordinary skill in the art would be able to use the primers as mentioned in the specification for amplification reactions on cDNA extracts of plant genetic material (*see,* Example 3.7 beginning on page 55 of the as-filed specification), and to devise "degenerate" primers based on a consensus sequence (as was done in Example 3.7). Guidance on the determination of alcohol acyltransferase activity is provided in the as-filed specification at Examples 4.4, 4.5, and 5 (pages 59 to 65), demonstrating that the genes specified therein show such activity. Accordingly, it is requested this rejection be withdrawn and claims 19 through 21 and 43 allowed. Applicants also note that support for new claim 47 may be found in the specification at the citations set forth in this paragraph.

35 U.S.C. § 112, Second Paragraph, Rejections

Claims 34 and 43 were rejected in the Final Office Action as being indefinite under 35 U.S.C. § 112, second paragraph. Claim 34 has been canceled. With respect to claim 43, the term "coding sequence" has been replaced by the term "amino acid sequence," as suggested in the Office Action.

Claim 43 was additionally rejected as assertedly indefinite, as the Office Action asserted that "it is unclear how a kit comprising a polypeptide of SEQ ID NO: 6 or 31 or fragments thereof is sufficient in diagnosing 'volatile ester compound.'" (Office Action at page 7). As amended, claim 43 is now directed to a "kit for screening fruit, which is capable of producing volatile ester compounds." Applicants respectfully submit that amended claim 43 is definite.

35 U.S.C. § 101 Rejection

Claim 46 was rejected in the Final Office Action as assertedly directed to non-statutory subject matter under 35 U.S.C. § 101. Applicants have amended claim 46 as suggested in the Office Action, and request is be allowed.

CONCLUSION

All pending claims are believed to be in condition for allowance and an early notice thereof is respectfully solicited. Should the Office determine that additional issues remain which might be resolved by a telephone conference, the Examiner is respectfully invited to contact applicants' attorney.

Respectfully submitted,

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